

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte J. DANIEL BRYANT, ROBERT M. RAMAGE, ARMAND J. BEAUDOIN,
HIDETOSHI UCHIDA and HIDEO YOSHIDA

Appeal No. 1998-2328
Application No. 08/560,138

ON BRIEF

Before WALTZ, KRATZ, and TIMM, Administrative Patent Judges.
WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 2 through 12, 18 and 19 as amended subsequent to the final rejection (see the amendment dated Aug. 15, 1997, Paper No. 10, entered as per the Advisory Action dated Aug. 20, 1997, Paper No. 11). Claim 21, the only other claim pending in this application, does not form a part of this appeal as it is objected to by the examiner but would be

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allowable if rewritten in independent form (Brief, page 2; Final Rejection, page 4).

According to appellants, the invention is directed to a method of making high-strength aluminum sheet products which includes controlling hot roll entry and exit temperatures during sheet processing to minimize or eliminate surface defects (Brief, page 3). A copy of illustrative claim 19 is attached as an Appendix to this decision.

The examiner relies upon Robertson et al. (Robertson), U.S. Patent No. 4,282,044, issued Aug. 4, 1981, as evidence of obviousness.¹ Accordingly, the claims on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over Robertson (Answer, page 3; see also the Final Rejection, page 2). We reverse the examiner's rejection essentially for the reasons set forth in

¹The examiner lists **three** references as "the prior art of record relied upon in the rejection" (Answer, page 3, paragraph (9)). In the re-statement of the rejection (Answer, page 3, paragraph (11)), no reference is identified but the examiner refers to Paper No. 5. In the Office action dated Nov. 27, 1996, Paper No. 5, page 3, the only rejection over prior art involves Robertson (see also the Final Rejection, again only employing Robertson as the evidence of obviousness). Accordingly, for purposes of this appeal, we only consider Robertson as the examiner's evidence of obviousness (see also the Brief, page 4, paragraph VI).

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the Brief and Reply Brief. We add the following comments for
emphasis and completeness.

OPINION

The examiner admits that Robertson does not teach the "exact composition" as recited in the method of claims 18 and 19 on appeal (Answer, page 4). However, the examiner concludes that the claimed compositions would have been obvious "because close approximation ranges in a composition is considered to establish a prima facie case of obviousness." Answer, page 5. The examiner submits that the "close approximation and overlap" of components of the composition establish obviousness, citing *In re Malagari, Titanium Metals [sic, Corp.] v. Banner*, and *In re Nehrenberg* (Answer, page 6, with citations therein).

As correctly argued by appellants on pages 11-14 of the Brief (see also the Reply Brief), *Titanium Metals* held that a prima facie case of obviousness is established when "[t]he proportions are so close that prima facie one skilled in the art would have expected them to have the same properties." *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 783, 227 USPQ 773, 779 (Fed. Cir. 1985). See also *In re Geisler*, 116 F.3d 1465, 1469, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); and *Haynes Int'l, Inc. v. Jessup Steel Co.*, 8 F.3d 1573, 1577 n.3, 28 USPQ2d 1652, 1655

n.3 (Fed. Cir. 1993). However, the reference as a whole must be considered, including disclosures teaching away from modifying the ranges of the reference. See *In re Geisler*, 116 F.3d at 1469, 43 USPQ2d at 1365. Here Robertson discloses a "broad range" and a "preferred range" for each component in the aluminum alloy (col. 5, ll. 55-63). Robertson teaches that

[t]he composition of the present alloy may vary within the ranges stated but the ranges themselves are critical, especially those of the primary alloying elements magnesium and manganese. Magnesium and manganese together exhibit a solid solution strengthening effect in the present alloy. Therefore, it is essential to provide these elements in amounts within the stated ranges as well as in a ratio of magnesium to manganese of between 1.4:1 and 4.4:1, and in a total concentration of magnesium and manganese of 2.0-3.3%. [Col. 5, l. 66-col. 6, l. 7, underlining added].

The examiner recognizes that the amounts of copper and magnesium recited in the composition of method claims 18 and 19 do not overlap with those disclosed by Robertson (see the Answer, page 6). Furthermore, the maximum amount of magnesium and manganese present in the claimed composition is 1.45%, contrasted with the teaching in Robertson that this total concentration should be 2.0-3.3% (see claims 18 and 19 on appeal and Robertson, col. 6,

11. 6-7). In view of the teachings of Robertson regarding the criticality and essential nature of the disclosed ranges and amounts, we find that the examiner has failed to establish any reason or motivation for modifying the composition of Robertson to include the claimed composition in the method of Robertson.

Additionally, we note that the examiner has not presented any convincing evidence or reasoning that Robertson discloses or suggests the exit temperature of the hot rolling process as recited in the claims on appeal. The examiner equates the "finish temperature" disclosed by Robertson with the "exit temperature" of the hot rolling operation (Answer, page 4, citing col. 10, ll. 29-32). Robertson teaches that "[t]he hot rolled strip is then coiled at a finish temperature, which is preferably 300 EC." (Col. 10, ll. 25-26). However, this teaching of Robertson refers to a temperature *after* the hot rolled strip is processed. The examiner has not presented any evidence or reasoning to support the finding that the finish temperature is the same as the exit temperature of the hot rolling operation.

For the foregoing reasons and those set forth in the Brief and Reply Brief, we determine that the examiner has not

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established a *prima facie* case of obviousness. Accordingly, the examiner's rejection of claims 2-12, 18 and 19 under 35 U.S.C. § 103 over Robertson is reversed.

OTHER ISSUES

Upon the return of this application to the jurisdiction of the examiner, the examiner and appellants should reconsider the patentability of the claimed subject matter with respect to obviousness-type double patenting and under 35 U.S.C. § 102(e)/103(a) in view of Beaudoin et al. (Beaudoin), U.S. Patent No. 5,480,498, issued on Jan. 2, 1996 (copy not attached). Beaudoin appears to have been commonly owned at the time of appellants' invention with some common inventors but a different inventive entity than this application. Beaudoin was made of record on page 2, ll. 21-23, of appellants' specification, and was referred to as the "parent" application in the Information Disclosure Statement dated Jan. 16, 1996, Paper No. 4. The *claims* of Beaudoin differ from the presently claimed subject matter in that Beaudoin does not recite the

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entry temperature of the hot rolling operation (note that the composition is specified in claim 9). However, hot rolling entry temperatures are well known in the art as being between approximately 850 to 1000°F. (see Beaudoin, col. 1, ll. 30-35), i.e., overlapping those entry temperatures recited in claim 19 on appeal.

Accordingly, the examiner and appellants should consider these issues upon return of this application to the examiner's jurisdiction.

The decision of the examiner is reversed.

REVERSED

THOMAS A. WALTZ)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
PETER F. KRATZ)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
CATHERINE TIMM)	
Administrative Patent Judge)	

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TAW/jrg

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APPENDIX

19. A method of producing an aluminum alloy sheet product comprising:

casting an aluminum alloy to provide a slab, said aluminum alloy, by weight percent, consisting essentially of 0.60 to 1.1 Si, 0.40 max. Fe, 0.50 to 0.9 Cu, 0.10 to 0.45 Mn, 0.5 to 1.0 Mg, 0.10 max Cr, 0.15 max Zn;

homogenizing the slab;

hot rolling the slab in a hot mill to provide an intermediate gauge product, the hot rolling being controlled so that the temperature of the slab entering the hot mill is between 950°F (510°C) and 1025°F (552°C) and the temperature of the intermediate gauge product exiting the hot rolling step does not exceed 575°F (302°C);

cold rolling the intermediate gauge product to a final gauge product, said cold rolling including one of: (a) annealing said intermediate gauge product between 700°F and 900°F (371°C and 482°C) followed by cold rolling said annealed intermediate gauge product to the final gauge product; and (b) cold rolling said intermediate gauge product to provide a second intermediate gauge sheet product, annealing said second intermediate gauge product between 600°F and 1000°F (316°C and 538°C), and cold rolling said annealed second intermediate gauge product to the final gauge product; and

solution heat treating and quenching the final gauge product to provide an aluminum alloy sheet product;

the process enabling the product to be subsequently strained while minimizing formation of ridging lines on a surface thereof.

Jenine Gillis

JUDGE WALTZ

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APJ WALTZ

APJ KRATZ

APJ TIMM

DECISION: **REVERSED**

PREPARED: Aug 14, 2002

OB/HD

PALM

ACTS 2

DISK (FOIA)

REPORT

BOOK

GAU: 1700